

Chrono

N.W.T. DEMOGRAPHY
AND LABOUR FORCE ACTIVITY

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DEMOGRAPHIC AND LABOUR FORCE CHARACTERISTICS

1. Population Growth

a) Natural Rate of Increase

The total population of the Northwest Territories has more than doubled over the past thirty years. The average annual rate of growth for this period was approximately 4.3 percent; which compares with the Canadian average annual growth rate over the same period of only 2.0 percent. Moreover, the growth rate of the total Canadian population appears to be declining while that of the N.W.T. appears to be increasing. Figure 1 compares population growth between Canada and the N.W.T., with their respective 1946 population indexed to 100 to demonstrate their relative growth rates.

The observed population change is the result of net migration and natural increase. Natural increase, in turn, is determined by death rates and birth rates; migration is excluded from the picture. As depicted in Figure 2, birth rates have invariably been higher in the N.W.T. than Canada. High birth rates in the N.W.T. are partly the result of a high value being placed on large families in a traditionally based economy. The decline in birth rates from 1960 to the present may be attributed to changing tastes and preferences, (cultural values), as well as a changing composition resulting from in-migration. To the extent in-migrants come from Southern Canada, it may be assumed their birth rates would approximate the lower Canadian average.

On the other hand, death rates have declined much more rapidly in the N.W.T. and since 1974 have remained below the Canadian average (Figure 3). This decline may be attributed to three factors. First, improved health services within the N.W.T.; secondly, the N.W.T. population is biased towards younger age groups, with only a small percentage of its population in the higher age brackets, and therefore, its death rate (a weighted average over all age groups) is lower. The third factor is improved access and information, which has enabled northerners to take better advantage of medical facilities.

The interaction of birth and death rates is reflected in the natural rate of increase. The natural rate of increase is consistently higher in the N.W.T. than Canada, with the largest gap occurring in the late sixties. As depicted graphically in Figure 4, the N.W.T. rate of natural increase has declined relative to Canada.

The following information is being provided for your information. The average annual rate of growth of the population of the United States is approximately 1.3 percent. The average annual rate of growth of the population of the United States is approximately 1.3 percent. The average annual rate of growth of the population of the United States is approximately 1.3 percent.

The observed population growth is the result of net migration and natural increase. Natural increase is determined by the difference between the birth rate and the death rate. The birth rate is the number of live births per 1,000 population per year. The death rate is the number of deaths per 1,000 population per year. The natural increase is the difference between the birth rate and the death rate.

Net migration is the difference between the number of immigrants and the number of emigrants. The number of immigrants is the number of people who move to the United States from other countries. The number of emigrants is the number of people who move from the United States to other countries. Net migration is the difference between the number of immigrants and the number of emigrants.

The following information is being provided for your information. The average annual rate of growth of the population of the United States is approximately 1.3 percent. The average annual rate of growth of the population of the United States is approximately 1.3 percent. The average annual rate of growth of the population of the United States is approximately 1.3 percent.

b) In-migration

The other major component of population growth is the result of in-and out-migration. Provincial and Territorial intermigration is usually a function of economic conditions. The probability of obtaining employment, as well as the expected returns from that employment, are primary influences on a person's decision to migrate. Consequently, regions which experience a sudden increase in economic activity also experience in-migration.

Historically, the major employment attraction within the Northwest Territories has been government expansion, and more recently, oil and gas exploration. Figure 5 illustrates net migration patterns within the Northwest Territories between 1950 and 1978. From the graph it is clear the Northwest Territories has experienced, on the average, positive net migration. The most recent period of in migration, as well as the most recent period of out migration, may be attributed to the anticipated oil pipeline scenario of the early 1970's and its subsequent demise. The 1966 influx of migrants is probably the result of increased mining activity; in particular the development of Pine Point Mines.

c) Age and Sex Distribution

The age/sex distribution is important because it influences future economic variables such as employment, per capita incomes, and infrastructure requirements. The age structure of the population reflects both the influence of natural rates of increase and migration.

The N.W.T.'s age/sex distribution portrays a small portion of the population in the higher age groups and a large percentage in the younger age groups relative to Canadian norms. The N.W.T. had only 2.2% of its population over sixty-five in 1976 while the proportion in Canada was 8.1%. On the other hand, the percent under 15 was 43 and 30 for the Northwest Territories and Canada respectively.

d) Ethnic Distribution

The three major ethnic groups, as defined by most data collection agencies in Canada, are Indians, Inuit (Eskimos), and "Other". Because the two native groups are defined according to rigid legal definitions, a substantial portion

The other major component of population growth is the result of in-migration. In-migration is usually a function of economic conditions. The probability of obtaining employment, as well as the expected returns from that employment, are primary influences on a person's decision to migrate. Consequently, regions which experience a relative increase in economic activity also experience an increase in migration.

Historically, the major employment attraction within the Northwest Territories has been government administration and more recently, oil and gas activity. Figure 1 illustrates net migration patterns within the Northwest Territories between 1950 and 1975. From the graph it is clear that the Northwest Territories has experienced, on the average, a net in-migration. The most recent period of net migration, as well as the most recent period of net migration, may be attributed to the anticipated oil pipeline activity at the early 1970's and its subsequent decline. The large influx of migrants is probably the result of increased mining activity; in particular the development of the Polar Mines.

c) Age and Sex Distribution

The age and sex distribution is important because it influences future economic activities such as employment, housing, and infrastructure requirements. The age structure of the Northwest Territories reflects both the influence of natural rates of increase and migration.

The N.W.T. sex distribution presents a slight variation of the population in the higher age groups and a slight increase in the younger age groups relative to Canada. The N.W.T. had only 2.1% of its population over 65 years of age in 1975 while the proportion in Canada was 6.1%. On the other hand, the proportion under 15 years of age for the Northwest Territories and Canada respectively, was 17.1% and 16.1%.

d) Ethnic Distribution

The three major ethnic groups as defined by most data collection agencies in Canada are Indians, Inuit (Eskimos), and Whites. The two latter groups are defined according to their legal status and racial origin.

portion of the "Other" group may be of Indian or Inuit ancestry. Keeping these limitations in mind, some trends may be identified.

In 1980, approximately 49% of the population was Native (Inuit and Indian) while 51% was "Other". This compares to 43% for the "Other" group in 1961, which indicates that although the total population of all three ethnic groups has grown, growth in the "Other" category has been relatively greater.

An examination of the age structure of each ethnic group indicates migration has been the predominant influence behind this trend; while it appears natural increase is the major influence behind the native groups increase, the bulge in the 20-40 age group for the "Other" category suggests this growth is strongly influenced by employment oriented in-migration.

PART II

POPULATION AND EMPLOYMENT CREATION

a) Population Projections

It is readily apparent from the foregoing discussion that the N.W.T. population is growing at a rate exceeding the national average. High birth rates have combined with low death rates to yield a high, although declining, rate of natural increase. In addition, net in migration has contributed significantly to population growth. While the mobile sector of the population is highly responsive to economic conditions, it is apparent the predominantly native sector of the population, who have traditional ties within the region, is less responsive to economic circumstances. As indicated in Table I, there will have to be approximately 1000 jobs created per annum simply to maintain present high levels of unemployment.

The population projections of the Planning and Program Evaluation Department of the Government of the Northwest Territories suggests a population of 47,775 in 1981. However, this projection relies heavily upon past trends, and does not include any explicit responses to migration changes. On the other hand, N.W.T. MODØ (the Department of Economic Development and Tourism's short term econometric simulation model) bases its population projection on past trends, while (these forecasts are based upon past economic growth trends and include no new major developments) including an explicit migration response to "realistic" economic growth. Consequently, the following analysis will depend heavily upon "short term" economic forecasts generated by N.W.T. MODØ.

6) The Labour Force

The size of the potential labour force is an indication of the maximum labour resource available. The potential labour force is defined here to include all persons between the ages of fifteen and sixty-four; that is, all persons of "working age".

The active labour force is defined as those who are employed, and those unemployed but actively seeking employment; where employment is defined as self-employment (i.e., trapping, operating a business, etc.) or wage employment. The proportion of the potential labour force that participates is influenced by family size and preferences, as well as economic necessity and opportunity.

The size of the potential labour force, like population, is a function of both natural increase and migration. The N.W.T. potential labour force is growing rapidly, and if the present economic structure remains unchanged, it will increase by slightly over 1000 every year; by 1985 it will have increased by 20%. This rapid growth demands an equally rapid growth in employment if rising unemployment is to be averted. If economic conditions remain constant (no new major developments occur), then it is doubtful the economy will be able to generate the necessary employment increases; while the potential labour force will increase by 20%, employment will barely increase by 2%. Over the same period unemployment will increase from the present level of 15.6% to 27.0%. These trends are illustrated in Tables I through IV in Appendix II. (1)

Footnotes:

- (1) The employment projection is based upon a 2% growth in government employment, and employment increases in the export sectors (oil and gas, mining, trapping and tourism) are linked to past trends. Increases in the support sectors are tied to the economic impact of the base or export sectors. Since the level of service and support sector activity is also dependent upon population growth, the above estimates also reflect the economic impact of an increasing population. However, the impact of any proposed development project (i.e., Arvik Mines) is not considered.
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c) Industrial Distribution

The industrial distribution of the labour force is a reflection of the region's economic maturity. In a developing region a large percentage of the labour force is found in primary industries, while in a more mature region, a greater percentage would be found in the secondary or tertiary sectors. (Secondary industries are represented by manufacturing, processing, and commerce; while tertiary industries are primarily service orientated; examples of which are consulting, finance and real estate companies). The N.W.T. employment distribution is presented in Table V of Appendix II..

Within the N.W.T., government, the support sectors (mainly secondary industries), and mining are, in that order, the major employers. It should be noted that the two largest employers, government and mining, are responsible for stimulating much of the Support Sector employment as well.

The income multiplier for mining and government is .53 and 2.10 respectively. This means that for every additional dollar spent (gross) in the mining sector, GTP (Gross Territorial Product) will increase by 53¢. An additional dollar spent by government will eventually increase GTP by \$2.10. These increases in GTP include both the direct and indirect impacts of sector expenditures.

The income multiplier associated with government is greater because import leakages are larger for mining than government. Further, the ratio of the labour to local value added in the government sector is larger than in the mining industry, reflecting the latter's capital intensive nature. These effects are apparently more than enough to offset the larger in-migration impact of mining development.

Another indicator of the importance of mining and government is the employment multiplier. The multipliers were calculated to be 3.45 and 2.27 for the government and the mining sectors respectively. This means that for every job created in the government sector, a further 2.45 jobs will be eventually generated in other sectors of the economy. The smaller mining sector multiplier suggests that fewer local activities are induced by a change in mining than in government employment. Therefore, the creation of a 1000 jobs in the economy would require the establishment of 290 new, direct government jobs and 441 new, direct mining jobs.



APPENDIX I
FIGURES (1 THROUGH 5)



Figure 1

Population Growth.

Northwest Territories vs. Canada

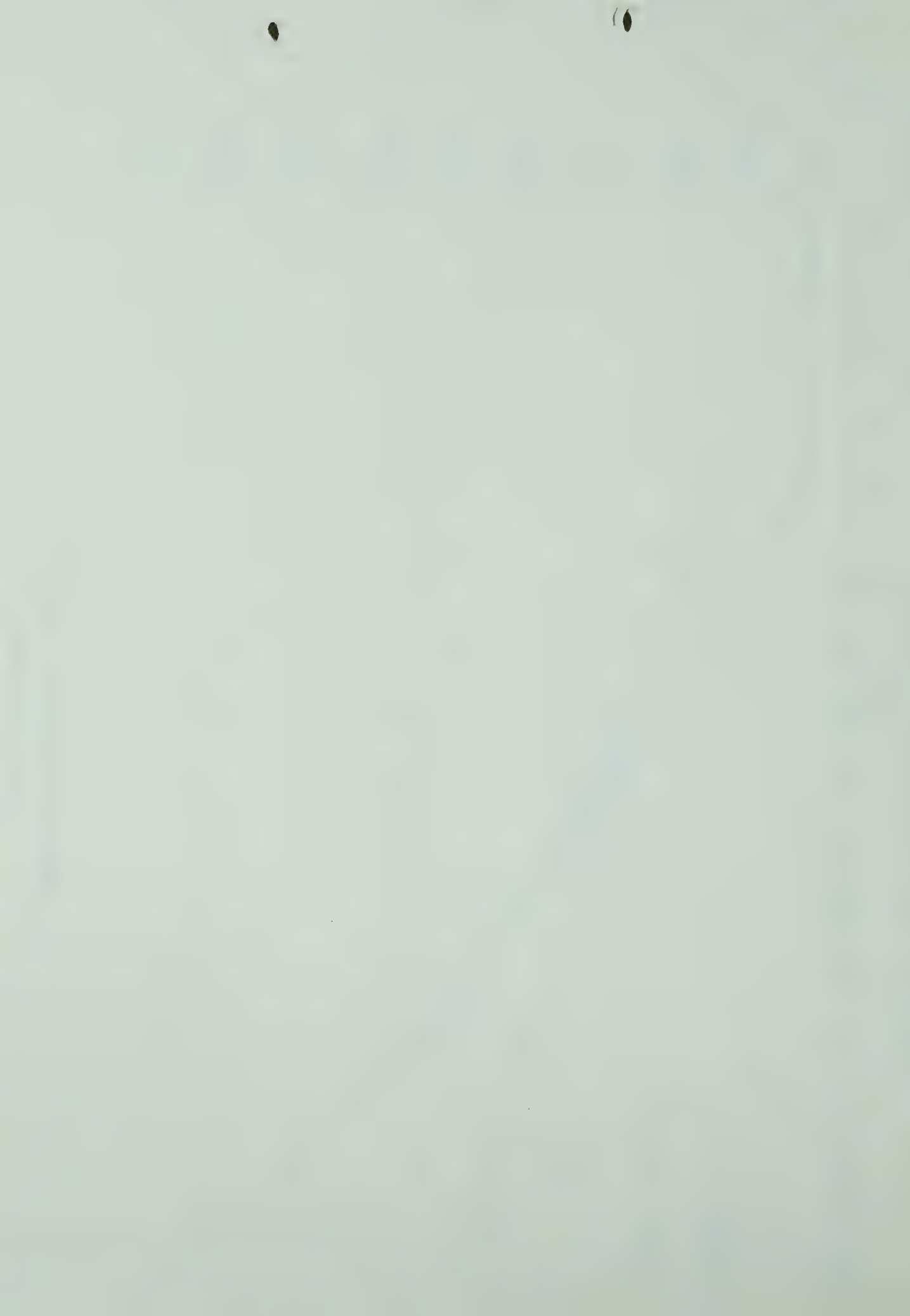
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1946 1948 1950 1952 1954 1956 1958 1960 1962 1964 1966 1968 1970 1972 1974 1976 1978

— N.W.T.
- - - - - Canada

Source: Statistics Canada, Canada Year Book, (Ottawa, 1946-1976).

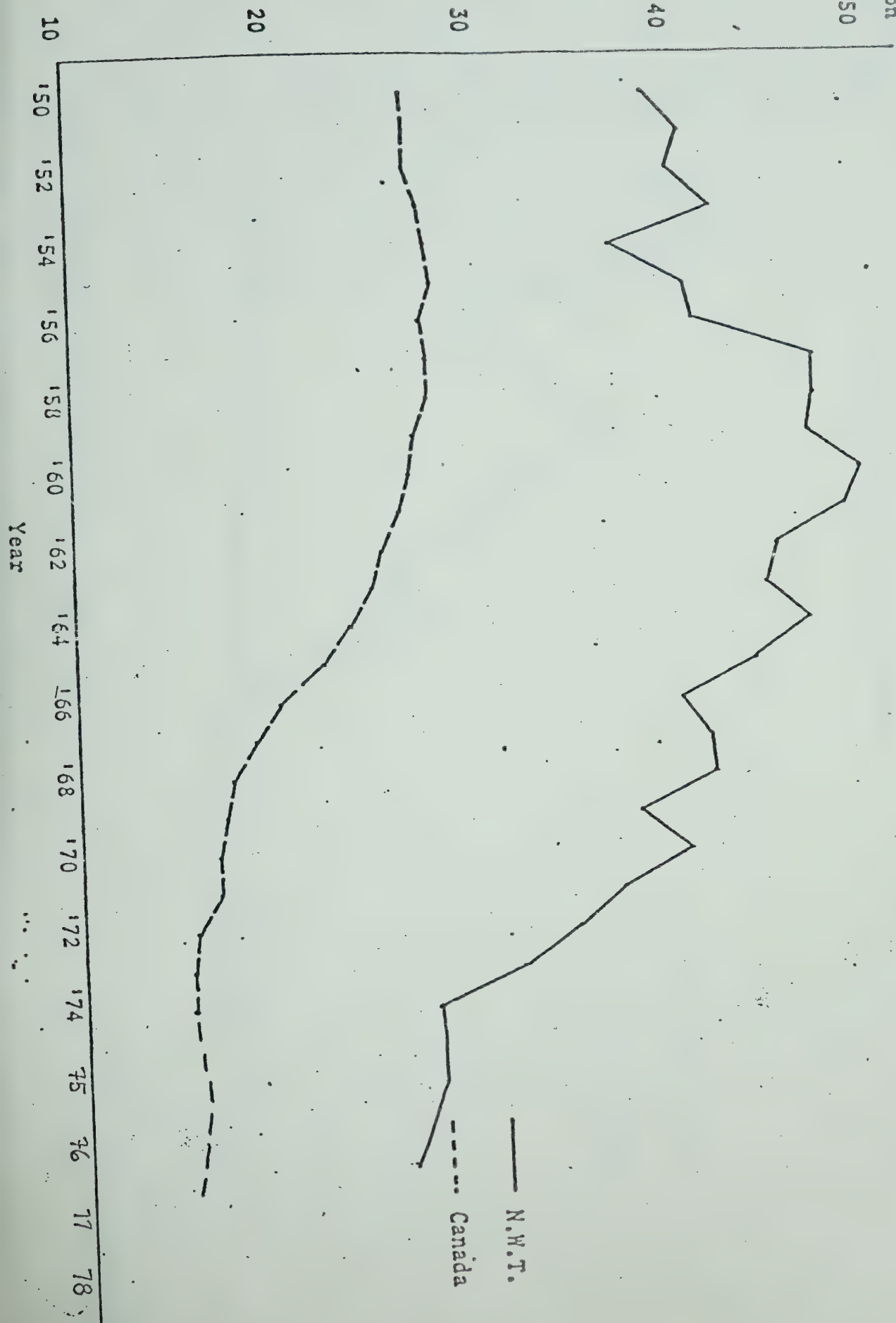


Births
per 1000
Population

- 5 -

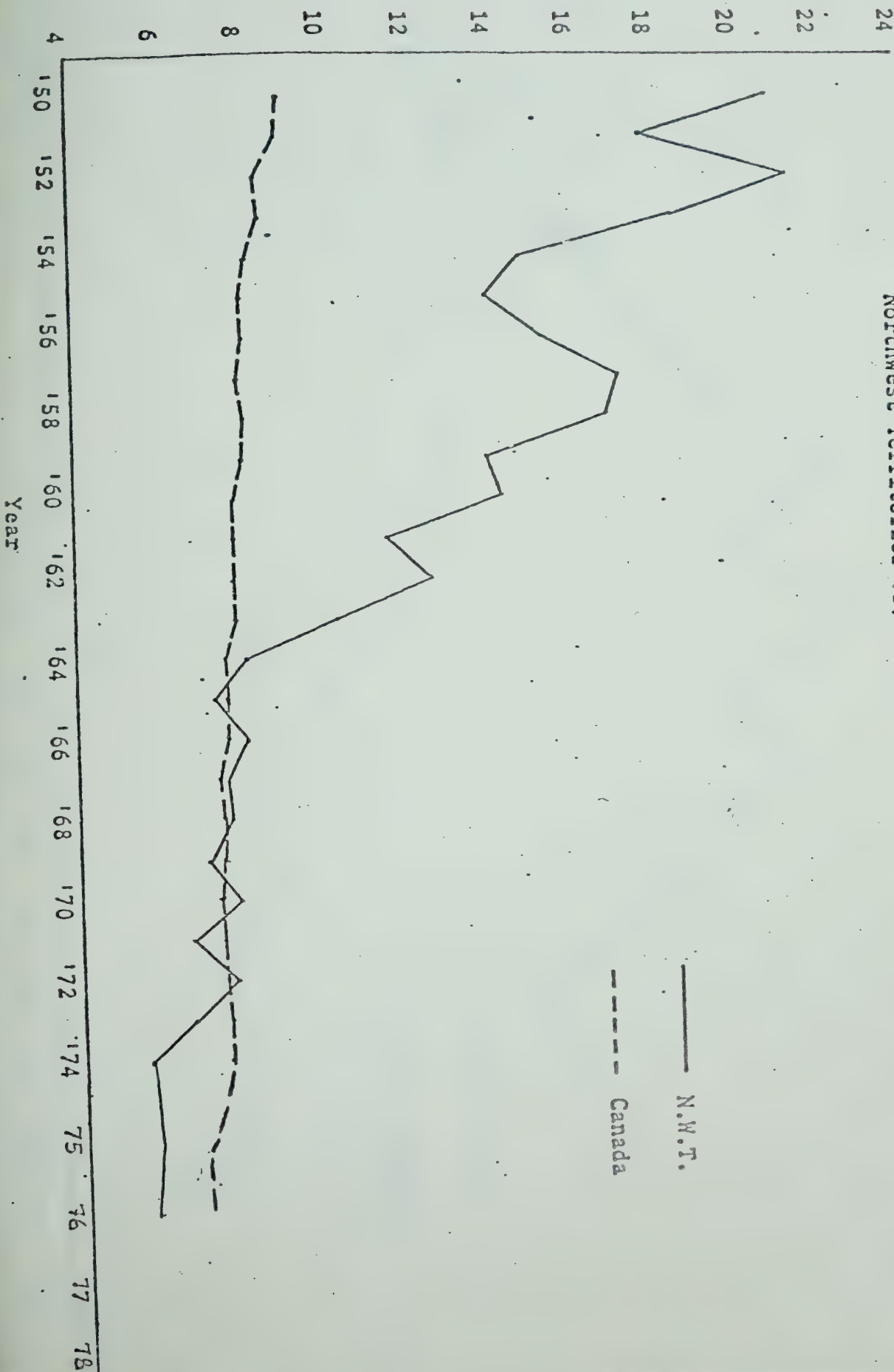
Northwest Territories vs. Canada

Figure 2
Birth Rates

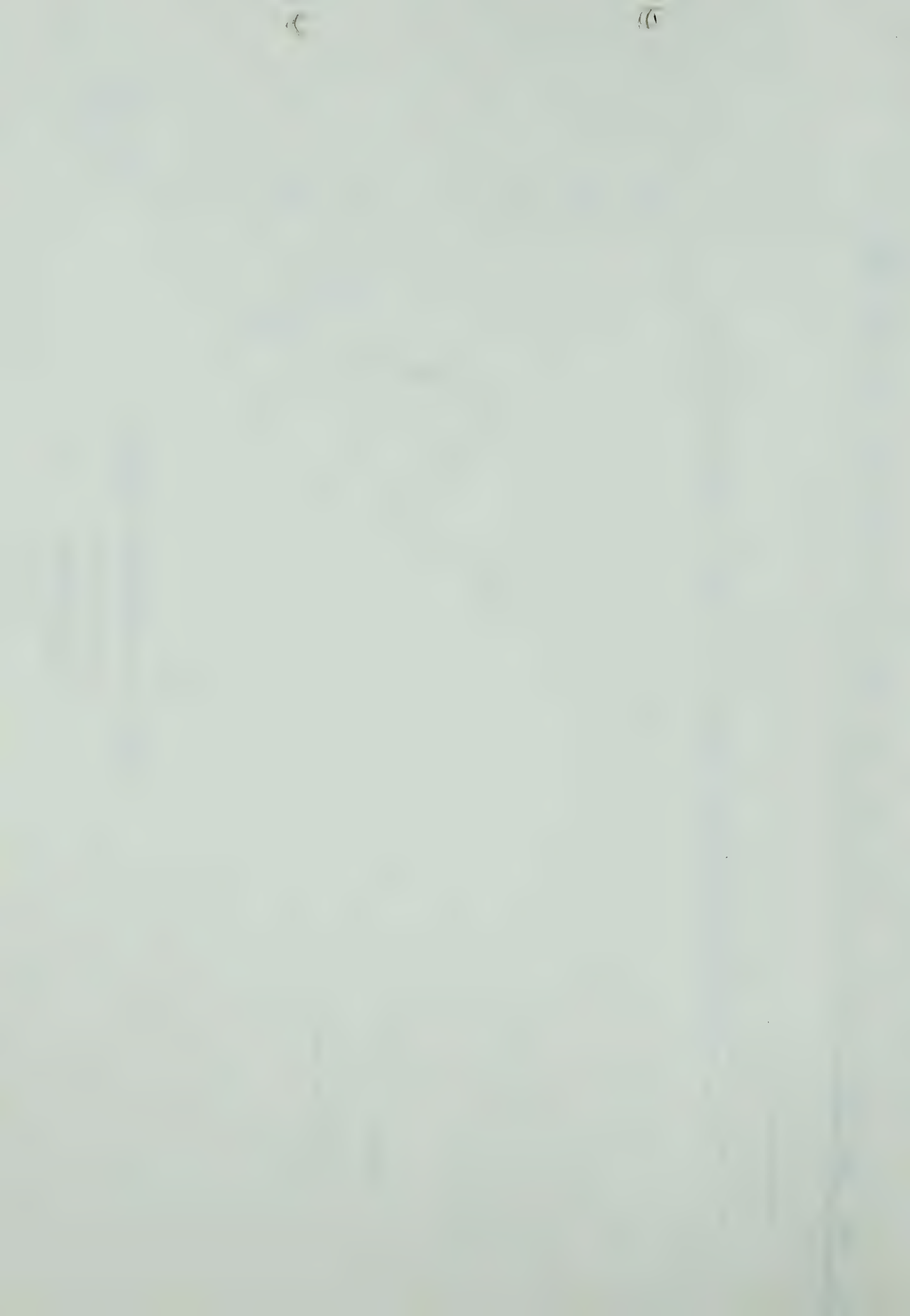


Deaths
per 1000
Population

Figure 3
Death Rates
Northwest Territories vs. Canada



Source: Statistics Canada, Catalogue No. 84-202, (1974).



Natural
Increase
per 1000
Population

Figure 4
Natural Increase Rate
Northwest Territories vs. Canada

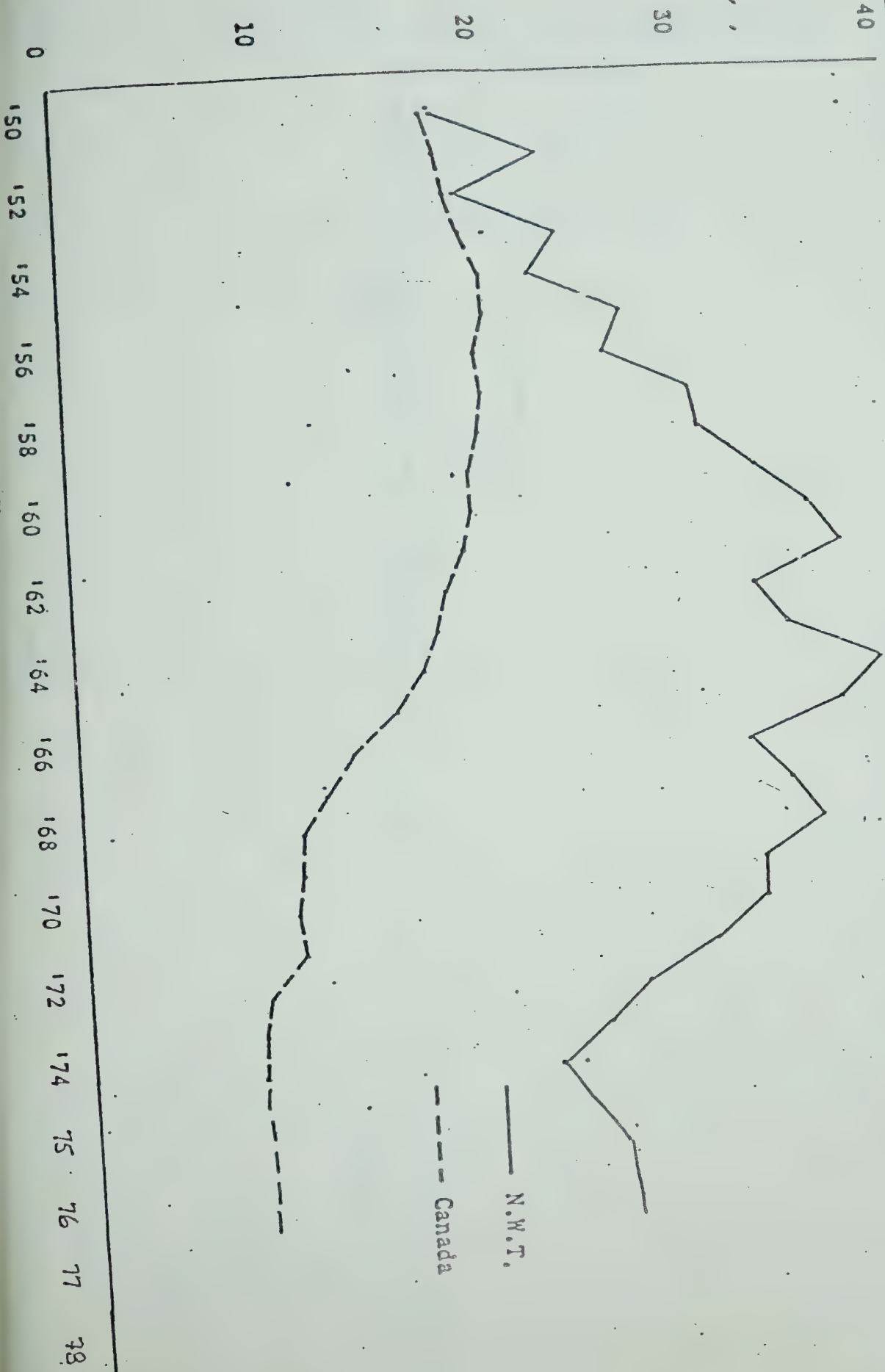
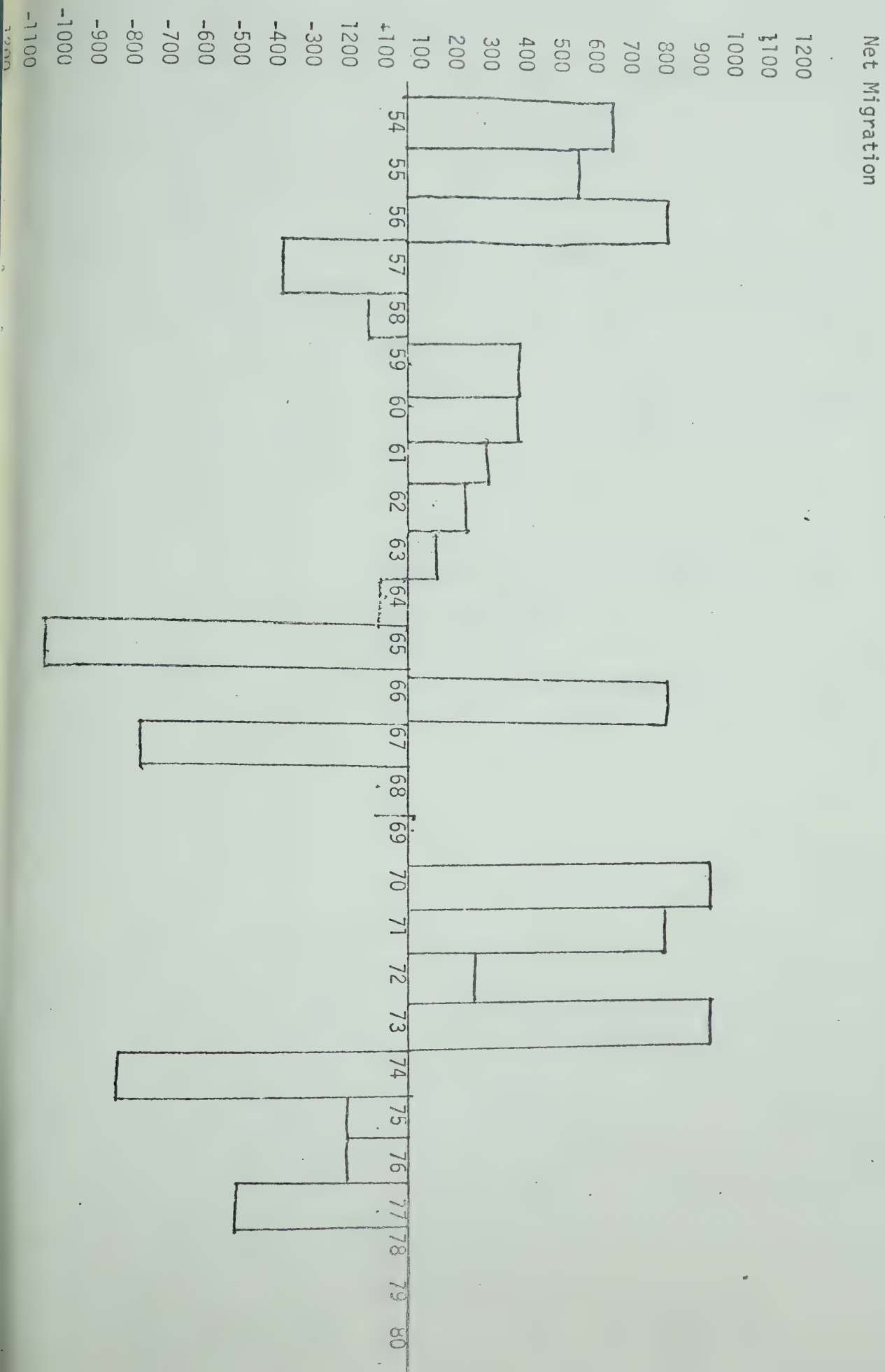
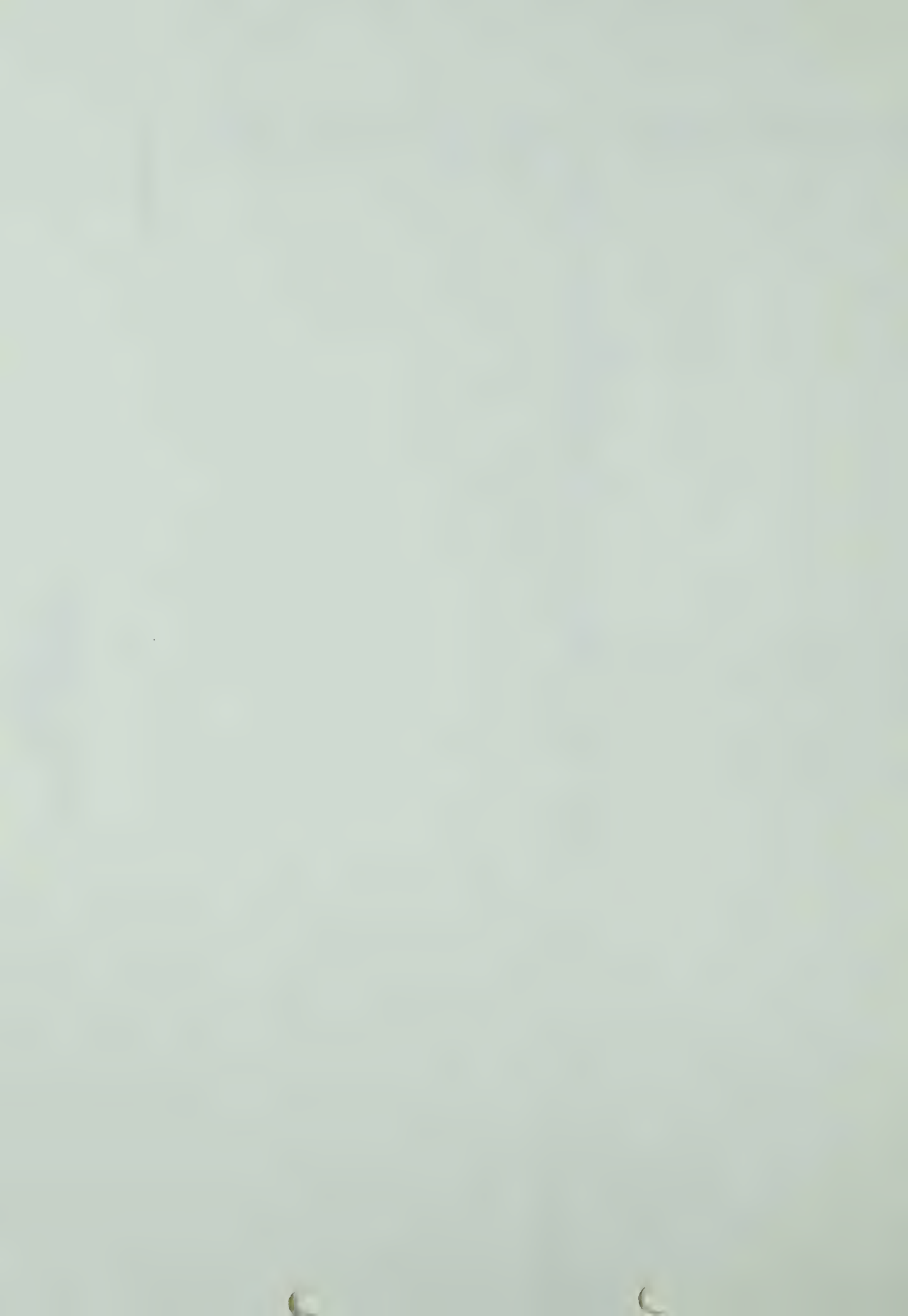


FIGURE 5
NET MIGRATION
NORTHWEST TERRITORIES





APPENDIX II

Statistical Tables
(I through V)

TABLE I
SELECT DEMOGRAPHIC AND LABOUR FORCE STATISTICS
1977 - 1985

Year	Population	Potential Labour Force	Active Labour Force	Participation Rate	Total Employ- ment	Unemploy- ment Rate
1977	47098	26979	15279	56.6%	13693	12.3%
1978	48258	27907	15718	56.3%	13994	10.90%
1979	49475	28801	16188	56.2%	14044	13.24%
1980	50751	29740	16690	56.1%	14092	15.6%
1981	52146	30866	17227	55.8%	14145	17.9%
1982	53611	32021	17784	55.5%	14196	20.2%
1983	55149	33207	18376	55.3%	14249	22.5%
1984	56766	34425	19008	55.2%	14307	24.7%
1985	58464	35673	19680	55.2%	14364	27.0%

SOURCE: N.W.T. MODØ Economic Planning Secretariat
Planning and Resource Development
Government of the Northwest Territories

TABLE II
LABOUR FORCE STATISTICS 1977-1985

Year	Population	Potential Labour Force	Total Employ- ment	Non-Native Active Labour Force	Native Active Labour Force	Total Active Labour Force
1977	47098	26979	13693	11065	4214	15279
1978	48258	27907	13994	11313	4405	15718
1979	49475	28801	14044	11580	4608	16188
1980	50751	29740	14092	11865	4825	16690
1981	52146	30866	14145	12171	5056	17227
1982	53611	32021	14196	12499	5285	17784
1983	55149	33207	14249	12850	5526	18376
1984	56766	34425	14307	13227	5781	19008
1985	58464	25673	14364	13630	6050	19680

SOURCE: N.W.T. MOD Economic Planning Secretariat
Planning and Resource Development Division
Economic Development and Tourism
Government of the Northwest Territories

TABLE III
EMPLOYMENT SHORTFALL 1971 - 1985

Year	Absolute Change in		Potential		Employment Increase	Total Potential Labour Force Employment Shortfall
	Total Population	Native Population	Total Labour Force	Native Potential Labour Force		
1977	1160	599	928	503	301	627
1978	1217	614	894	534	50	844
1979	1276	686	939	570	48	891
1980	1395	705	1126	610	53	1073
1981	1465	725	1155	602	51	1104
1982	1588	745	1186	635	53	1133
1983	1617	766	1218	671	58	1160
1984	1698	869	1248	707	57	1191
1985						

(1) This column indicates the number of additional jobs required each year to maintain the previous level of unemployment. For example in 1983, 113 additional jobs would be required to maintain the same level of unemployment as occurred in 1982. Any decrease in absolute unemployment would require even additional job creation.

SOURCE: N.W.T. MODØ Economic Planning
Planning and Resource Development Division
Economic Development and Tourism
Government of the Northwest Territories

TABLE IV
NATIVE LABOUR FORCE CHARACTERISTICS 1977-1985

Year	Native Population	Native Potential Labour Force	Native Active Labour Force	Native Participation Rate
1977	23410	11089	4214	38%
1978	24009	11592	4405	38%
1979	24623	12126	4608	38%
1980	25309	12696	4825	38%
1981	26014	13306	5056	38%
1982	26739	13908	5285	38%
1983	27484	14543	5526	38%
1984	28250	15214	5781	38%
1985	29119	15921	6050	38%

SOURCE: N.W.T. MODØ Economic Planning Secretariat
Planning and Resource Development Division
Economic Development and Tourism
Government of the Northwest Territories

TABLE V
EMPLOYMENT BY SECTOR 1977 - 1985

Year	Economic Sector				Government	Support Sectors
	Mineral Exploration Pursuits Employment	Traditional Mining	Tourism			
1977	1359	562	1481	515	4997	4779
1978	1360	552	1511	507	5355	4709
1979	1360	542	1541	500	5463	4638
1980	1360	532	1571	493	5572	4564
1981	1361	522	1603	486	5684	4489
1982	1361	512	1635	479	5797	4412
1983	1361	502	1667	472	5913	4334
1984	1362	493	1701	465	6032	4254
1985	1362	484	1735	459	6152	4172

SOURCE: N.W.T. MODØ Economic Planning Secretariat
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